

REMARKS

Claims 1, 4-10, 12-14, and 21-28 are currently pending in the application. By this response, no claims are amended, added, or canceled. Reconsideration of the rejected claims in view of the above amendments and the following remarks is respectfully requested.

35 U.S.C. §112 Rejection

Claims 1, 8, and 21, and their dependent claims, are rejected under 35 U.S.C. §112, 2nd paragraph. The Examiner asserts that the terms "narrow" and "wide" render the claims indefinite. This rejection is respectfully traversed.

According to MPEP §2173.02, the test for definiteness under 35 U.S.C. 112, second paragraph, is whether "those skilled in the art would understand what is claimed when the claim is read in light of the specification." *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 806 F.2d 1565, 1576, 1 USPQ2d 1081, 1088 (Fed. Cir. 1986). Definiteness of claim language must be analyzed, not in a vacuum, but in light of: (A) the content of the particular application disclosure; (B) the teachings of the prior art; and (C) the claim interpretation that would be given by one possessing the ordinary level of skill in the pertinent art at the time the invention was made. Applicants submit that the claims are clear and definite when read in light of the specification and with the knowledge generally available to one of ordinary skill in the art.

For example, a target shape having a narrow section and wide section and a follow-on mask having a wide section and a narrow section are described in at pages 4-5 of Applicants' specification, which state:

The target shape 12 is the final shape to which the underlying substrate will be formed using the hard mask loop 10 and a follow-on mask. The target shape 12 includes a wide section 14 and a narrow section 16. The wide section 14 of the target shape 12 overlaps the hard mask loop 10; whereas, the narrow section 16 of the target shape 12 coincides with a portion of the hard mask loop 10.

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Referring to FIG. 2, a follow-on mask 18 is formed over a portion of the hard mask loop 10. The follow-on mask 18 includes a wide section 20, which corresponds to the wide section 14 of the target shape 12. The follow-on mask 18 also includes a narrow section 22 which corresponds to the narrow section 16 of the target shape 12. The follow-on mask 18 may be formed by any of the methods well known in the art suitable for forming a follow-on mask over a hard mask loop including, expanding a desired wide-feature design by an undercut/ashback amount, and adding tabs to cover desired portions of the hard mask loop 10.

Also, the respective narrow and wide sections of both the target shape and the follow-on mask are depicted in Applicants' FIGS. 1-3. Moreover, Applicants note that breadth of a claim is not to be equated with indefiniteness. *In re Miller*, 441 F.2d 689, 169 USPQ 597 (CCPA 1971). See also MPEP 2173.04. As such, Applicants submit that the terms "narrow" and "wide" do not need to define specific dimensions. For these reasons, Applicants submit that one of ordinary skill in the art would reasonably ascertain the scope of the claim when analyzing the claim in light of the content of the instant application disclosure and the teachings of the prior art.

Accordingly, Applicants respectfully request that the §112, 2nd Paragraph, rejection of claims 1, 8, and 21, and their dependent claims, be withdrawn.

35 U.S.C. §103 Rejection

Claims 1, 4-8, 12-14, 21-23, 27, and 28 are rejected under 35 U.S.C. §103(a) for being unpatentable over U.S. Pat. No. 4,538,748 issued to Gruner et al. ("Gruner") in view of what the Examiner characterizes as "Applicants' Admitted Prior Art."¹ Claims 9 and 10 are rejected under 35 U.S.C. §103(a) for being unpatentable over Gruner and "Applicants' Admitted Prior Art," and further in view of U.S. Pub. No. 2005/0106837 issued to Nakai et al. ("Nakai"). These rejections are respectfully traversed.

¹ Applicants note that claims 24-26 are not listed as rejected at page 2 of the Office Action, yet pages 4-5 of the Office Action set forth an explanation of a rejection of claims 23-26. Clarification of this inconsistency is requested.

To establish a *prima face* case of obviousness, all claim limitations must be taught or suggested by the prior art. *See, In re Royka*, 490 F.2d 981, 985, 180 USPQ 580, 583 (CCPA 1974); *see also, In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Applicants submit that the applied art fails to disclose or suggest all of the features of the claimed invention.

The rejection does not address the language of the claims.

Applicants initially submit that the rejection of claims 1, 4-8, 12-14, 21-23, 27, and 28 is improper and should be withdrawn because the rejection does not address the language recited in the current claims. That is, the explanation of the rejection addresses language of a previous claim set that has since been amended. Independent claims 1, 8, and 21 were amended in an Amendment Under 37 C.F.R. 1.114 on January 5, 2009 (the "RCE Amendment"). However, the Examiner's rejection in the current Office Action does not address the claims as amended. Instead, the rejection is based on the language of the previous claim set from the Amendment Under 37 C.F.R. 1.111 dated April 30, 2008. Therefore, the rejection fails to establish a *prima facie* case of obviousness and should be withdrawn for this reason alone.

For example, claim 1 recites *removing an exposed portion of the hard mask that is not covered by the follow-on mask*. The rejection asserts that Gruner discloses "removing an exposed portion of the hard mask." However, the rejection fails to address the recitation "...*that is not covered by the follow-on mask*" which was added in the RCE Amendment.

Similarly, claim 1 recites *protecting a pair of critical edges of the hard mask on the substrate with a first portion of a follow-on mask, wherein a width of the first portion of the follow-on mask exceeds the critical width by an amount of overlap, and a width of a wide section of the follow-on mask exceeds a width of a wide section of the target shape*. However, the rejection only asserts that Gruner discloses "protecting a pair of critical edges of the hard mask

on the substrate with a first portion of a second mask.” The rejection omits any explanation regarding the recited “*wherein ...*” clause which was added via the RCE Amendment. For example, the rejection makes no mention of *exceeding a critical width by an amount of overlap*. Also, the rejection is completely silent as to *a width of a wide section of the follow-on mask exceeding a width of a wide section of the target shape*.

Also, the rejection addresses features that were omitted via the RCE Amendment, which provides further evidence that the Examiner is basing the current rejection on the wrong claim set. Particularly, the Examiner states that Gruner discloses “forming a wide-image mask on the left and right regions ... of the substrate proximate the hard mask with a second portion of the second mask.” This assertion by the Examiner unquestionably refers to the previous claim 1 recitation: *forming a wide-image mask on the substrate proximate the hard mask with a second portion of the follow-on mask*. However, this recitation was omitted from claim 1 via the RCE Amendment.

All of the above-noted examples are clear evidence that the Examiner is basing the rejection on a prior claim set, and not on the current claim set that was submitted with the RCE Amendment. This renders the rejection fatally defective on its face, since:

All words in a claim must be considered in judging the patentability of that claim against the prior art. *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). See also, MPEP 2143.03.

In this case, as evidenced by the discussion above, the Examiner has failed to consider all of the words in independent claim 1 as amended in the RCE Amendment dated January 5, 2009. Instead, the Examiner addressed the language of a previous claim set. Thus, the Examiner has failed to establish a *prima facie* case of obviousness, and the rejection is improper.

The references do not disclose all of the recited features.

Independent claim 1

As discussed in Applicants' previous response, the invention relates to semiconductor fabrication, and more particularly to fabricating a combination of small and large structures. In embodiments, a target shape for fabrication has a narrow section and a wide section. According to aspects of the invention, a sidewall image transfer (SIT) loop is formed as a hard mask over portions of the target shape, the SIT loop having a width that is equal to and coincident with a width of the narrow section of the target shape. A follow-on mask may be formed over portions of the SIT loop and the target shape. For example, the follow-on mask may have a first (e.g., narrow) portion formed over the narrow section of the target shape, wherein the first (e.g., narrow) portion of the follow-on mask has a width that exceeds the width of the narrow section of the target shape. Also, the follow-on mask may have a second (e.g., wide) portion formed over the wide section of the target shape, wherein the second (e.g., wide) portion of the follow-on mask has a width that exceeds the width of the wide section of the target shape.

The follow-on mask enables cutting the SIT loop into segments and adds larger features to the image formed by the SIT loop, without interfering with the accuracy for those portions of the final image formed by the SIT loop. In this manner, implementations of the invention provide a reduction in the number of masks required to form a final image, especially when combining SIT imaging processes with traditional masking techniques. More specifically, independent claim 1 recites:

1. A method of semiconductor fabrication, comprising the steps of:
forming a sidewall image transfer (SIT) loop on a substrate such that the SIT loop forms a hard mask having a width substantially equal to a critical width of a narrow section of a target shape;
protecting a pair of critical edges of the hard mask on the substrate with a first portion of a follow-on mask, wherein a width of the first portion of the

follow-on mask exceeds the critical width by an amount of overlap, and a width of a wide section of the follow-on mask exceeds a width of a wide section of the target shape;

removing an exposed portion of the hard mask that is not covered by the follow-on mask; and

exposing the pair of critical edges of the hard mask by etching the follow-on mask to reduce the width of the first portion of the follow-on mask to less than the critical width.

The Examiner asserts that it would have been obvious to modify the teachings of Gruner based on the description of sidewall image transfer techniques set forth in the Background section of Applicants' specification. Notwithstanding, Applicants submit that no proper combination of the applied art discloses or suggests the combination of features recited in claim 1, as amended herein.

As the Examiner acknowledges, Gruner does not disclose sidewall image transfer (SIT) techniques. Instead, Gruner only discloses photo-lithographic imaging. Although Applicants generally describe SIT techniques in the Background section of the specification, Applicants do not acquiesce in the Examiner's assertion that the features of the claims are "admitted prior art." In any event, Applicants submit that no proper combination of Gruner and "Applicants' Admitted Prior Art" teaches: (i) *a width of the first portion of the follow-on mask exceeds the critical width by an amount of overlap, and a width of a wide section of the follow-on mask exceeds a width of a wide section of the target shape*; and (ii) *exposing the pair of critical edges of the hard mask by etching the follow-on mask to reduce the width of the first portion of the follow-on mask to less than the critical width*.

More specifically, the applied art fails to disclose or suggest *protecting a pair of critical edges of the hard mask on the substrate with a first portion of a follow-on mask, wherein a width of the first portion of the follow-on mask exceeds the critical width by an amount of overlap, and*

a width of a wide section of the follow-on mask exceeds a width of a wide section of the target shape. The Examiner asserts that Gruner's photoresist mask 90 is a follow-on mask that protects critical edges of the hard mask 5 (Office Action, pages 2-3). Notwithstanding, Applicants submit that mask 90 does not have both (1) a first portion whose width exceeds the critical width by an amount of overlap, and (2) a wide section whose width exceeds a width of a wide section of the target shape. To the contrary, Gruner's mask 90 does not extend width-wise beyond the width of any shape that it covers (see, e.g., FIGS. 2e-2h). Nor has the Examiner identified any passage or drawing in Gruner that teaches theses recited features. Instead, the rejection is completely silent with respect to these features.

Moreover, Gruner does not disclose a target shape having a narrow section and a wide section. Instead, Gruner only shows side views of the semiconductor structure, and makes no mention of a target shape that has both a narrow section and a wide section. Furthermore, the Examiner has failed to identify in Gruner a target shape having a narrow section and a wide section. Therefore, Gruner cannot reasonably be construed as teaching *protecting a pair of critical edges of the hard mask on the substrate with a first portion of a follow-on mask, wherein a width of the first portion of the follow-on mask exceeds the critical width by an amount of overlap, and a width of a wide section of the follow-on mask exceeds a width of a wide section of the target shape*, as recited in claim 1.

In further contrast to the claimed invention, Gruner does not disclose or suggest *exposing the pair of critical edges of the hard mask by etching the follow-on mask to reduce the width of the first portion of the follow-on mask to less than the critical width*. Gruner does not disclose critical edges of a hard mask, does not disclose a critical width, and does not disclose etching the follow-on mask to reduce the width of the first portion of the follow-on mask to less than the

critical width. Instead, Gruner only discloses conventional photolithographic techniques utilizing photoresist mask 90. Put another way, Gruner does not disclose or suggest reducing a width of a portion of the mask 90 to less than a critical width to expose critical edges of a hard mask, where the width of the portion of the mask 90 initially exceeded the critical width by an amount of overlap.

The description in the Background section of Applicants' specification does not cure the above-noted deficiencies of Gruner with respect to independent claim 1. Particularly, Applicants do not disclose or suggest *protecting a pair of critical edges of the hard mask on the substrate with a first portion of a follow-on mask, wherein a width of the first portion of the follow-on mask exceeds the critical width by an amount of overlap, and a width of a wide section of the follow-on mask exceeds a width of a wide section of the target shape and exposing the pair of critical edges of the hard mask by etching the follow-on mask to reduce the width of the first portion of the follow-on mask to less than the critical width* in the Background section of the specification. Nor have Applicants admitted that such features are prior art. Instead, Applicants only generally describe sidewall image transfer (SIT) techniques in the Background section of the specification. Therefore, no proper combination of Gruner and "Applicants' Admitted Prior Art" teaches the combination of features recited in claim 1.

Independent claim 8

Independent claim 8 recites:

8. A method of semiconductor fabrication, comprising the steps of:
forming a sidewall image transfer (SIT) loop on a substrate such that the SIT loop forms a hard mask, wherein a width of the hard mask substantially equals a width of a narrow section of a target shape;
forming a follow-on mask in a loop-cutter pattern on a portion of the hard mask, wherein the follow-on mask comprises a wide-image section having a width that exceeds a width of a wide section of the target shape and a narrow-image section having a width that exceeds the width of the hard mask;

removing a portion of the hard mask left exposed by the follow-on mask;
and
removing at least a portion of the narrow-image section of the follow-on mask.

Applicants submit that no proper combination of the applied art discloses or suggests the combination of features recited in claim 8. For example, Gruner cannot reasonably be said to disclose *forming a sidewall image transfer (SIT) loop on a substrate such that the SIT loop forms a hard mask, wherein a width of the hard mask substantially equals a width of a narrow section of a target shape*, as recited in claim 8. More specifically, Gruner does not disclose a sidewall image transfer (SIT) loop, and does not disclose teach a target shape having both a wide section and a narrow section. Instead, Gruner discloses conventional photolithography (without mentioning SIT techniques), and shows side views of a structure in which no shape has both a wide section and a narrow section. Therefore, Gruner cannot reasonably be said to disclose *forming a sidewall image transfer (SIT) loop on a substrate such that the SIT loop forms a hard mask, wherein a width of the hard mask substantially equals a width of a narrow section of a target shape*.

Moreover, Gruner does not disclose *forming a follow-on mask in a loop-cutter pattern on a portion of the hard mask, wherein the follow-on mask comprises a wide-image section having a width that exceeds a width of a wide section of the target shape and a narrow-image section having a width that exceeds the width of the hard mask*, as recited in claim 8. To the contrary, Gruner does not even disclose a loop. Instead, Gruner only discloses side views of the structure. Therefore, Gruner cannot be construed as disclosing *forming a follow-on mask in a loop-cutter pattern on a portion of the hard mask*.

Additionally, Guner does not disclose or suggest that the follow-on mask that is formed in a loop-cutter pattern also comprises *a wide-image section having a width that exceeds a width of a wide section of the target shape and a narrow-image section having a width that exceeds the width of the hard mask*. As discussed above with respect to claim 1, Gruner does not disclose a follow on mask that has a wide-image section having a width that exceeds a width of a wide section of the target shape and a narrow-image section having a width that exceeds the width of the hard mask. To the contrary, Gruner's photoresist mask 90 does not extend width-wise beyond the width of any shape that it covers. Therefore, Gruner does not teach *the follow-on mask comprises a wide-image section having a width that exceeds a width of a wide section of the target shape and a narrow-image section having a width that exceeds the width of the hard mask*, as recited in claim 8.

As also discussed above with respect to claim 1, Applicants submit that the description in the Background section of Applicants' specification does not cure the above-noted deficiencies of Gruner with respect to independent claim 8. Instead, Applicants only generally describe sidewall image transfer (SIT) techniques in the Background section of the specification. Therefore, no proper combination of Gruner and "Applicants' Admitted Prior Art" teaches the combination of features recited in claim 8.

Independent claim 21

Independent claim 21 recites:

21. A method of combining a wide-image mask and loop-cutter mask, comprising the steps of:

forming a sidewall image transfer (SIT) hard mask loop on a substrate, wherein a width of a narrow section of a target shape substantially equals a width of the hard mask loop, and a width of a wide section of the target shape exceeds the width of the hard mask loop;

forming a follow-on mask over a portion of the hard mask loop, wherein the follow-on mask includes a first section corresponding to the wide section of

the target shape and a second section overlapping the narrow section of the target shape, and a width of the second section of the follow-on mask exceeds the width of the narrow section of the target shape;

removing regions of the hard mask loop uncovered by the follow on mask;
etching the second section of the follow-on mask to expose underlying edges of the hard mask loop;

etching the first section of the follow-on mask to reduce its length and width to produce an image pad that substantially conforms to the wide section of the target shape; and

etching the substrate uncovered by the remaining hard mask loop and image pad.

Applicants initially submit that the rejection of claim 21 is improper because the Examiner has failed to address the language of claim 21. The Examiner has grouped claim 21 with the rejection of claim 1, while only addressing the language of claim 1. However, claim 21 recites features that are not recited in claim 1 (e.g., *etching the first section of the follow-on mask to reduce its length and width to produce an image pad that substantially conforms to the wide section of the target shape*, and *etching the substrate uncovered by the remaining hard mask loop and image pad*), such that an explanation of the rejection of claim 1 cannot serve to establish a *prima facie* case of obviousness with respect to claim 21.

This makes the rejection fatally defective on its face, since MPEP §2143.03 states: “[a]ll words in a claim must be considered in judging the patentability of that claim against the prior art.” *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). Moreover, 37 C.F.R. §1.104 states: “[t]he examination shall be complete with respect both to compliance of the application or patent under reexamination with the applicable statutes and rules and to the patentability of the invention as claimed ...” (emphasis added). Moreover, MPEP §707.07(d), states that “[a] plurality of claims should never be grouped together in a common rejection, unless that rejection is equally applicable to all claims in the group.” In this case, the Examiner

has committed clear error by improperly grouping claim 21 with the rejection of other claims while failing to address the language of claim 21.

In any event, Applicants submit that no proper combination of the applied art discloses or suggests the combination of features recited in claim 21. For example, Gruner does not disclose *forming a sidewall image transfer (SIT) hard mask loop on a substrate, wherein a width of a narrow section of a target shape substantially equals a width of the hard mask loop, and a width of a wide section of the target shape exceeds the width of the hard mask loop*. Instead, Gruner discloses conventional photolithography, and does not disclose SIT techniques. Moreover, Gruner only discloses side views of a semiconductor structure, none of which depict a loop. Additionally, Gruner only shows side views of a structure in which no target shape has both a wide section and a narrow section. Therefore, Gruner cannot be construed as disclosing *forming a sidewall image transfer (SIT) hard mask loop on a substrate, wherein a width of a narrow section of a target shape substantially equals a width of the hard mask loop, and a width of a wide section of the target shape exceeds the width of the hard mask loop*, as recited in claim 21.

Additionally, Gruner does not disclose *forming a follow-on mask over a portion of the hard mask loop, wherein the follow-on mask includes a first section corresponding to the wide section of the target shape and a second section overlapping the narrow section of the target shape, and a width of the second section of the follow-on mask exceeds the width of the narrow section of the target shape*, as recited in claim 21. Gruner simply does not disclose a follow on mask that includes both: (1) a first section that corresponds to a wide section of a target shape and (2) a second section that overlaps a narrow section of the target shape and has a width exceeding the narrow section of the target shape. To the contrary, Gruner's photoresist mask 90 does not extend width-wise beyond the width of any shape that it covers.

Furthermore, Gruner does not disclose or suggest *etching the first section of the follow-on mask to reduce its length and width to produce an image pad that substantially conforms to the wide section of the target shape*, as recited in claim 21. Gruner does not disclose etching a section of photoresist mask 90 to reduce its length and width. Instead, Gruner only discloses side views of the fabrication, and makes no mention of reducing a length and width of a feature as seen from above, as in Applicants' claimed invention.

Additionally, Gruner does not disclose an image pad as recited in the claimed invention. To the contrary, Gruner is completely silent as to an image pad that substantially conforms to the wide section of the target shape. Therefore, Gruner cannot arguably be construed as teaching *etching the first section of the follow-on mask to reduce its length and width to produce an image pad that substantially conforms to the wide section of the target shape, and etching the substrate uncovered by the remaining hard mask loop and image pad*, as recited in claim 21. Moreover, Applicants note that the Examiner failed to address these recitations in the Office Action.

As discussed above with respect to claims 1 and 8, Applicants submit that the description in the Background section of Applicants' specification does not cure the above-noted deficiencies of Gruner with respect to independent claim 8. Instead, Applicants only generally describe sidewall image transfer (SIT) techniques in the Background section of the specification. Therefore, no proper combination of Gruner and "Applicants' Admitted Prior Art" teaches the combination of features recited in claim 1.

Dependent Claims 4-7, 12-14, and 22-28

Claims 4-7, 12-14, and 22-28 depend from independent claims 1, 8, and 21, respectively, and are distinguishable from the applied art at least for the reasons discussed above with respect

to the independent claims. Moreover, as discussed in detail below, the applied art fails to disclose or suggest many of the additional features recited in these dependent claims.

Claim 4

The applied art does not disclose or suggest *the exposing the pair of critical edges of the hard mask comprises etching the first portion of the follow-on mask from a side of the first portion of the follow-on mask*, as recited in claim 4. The Examiner asserts that Gruner's mask 91 is also considered a follow-on mask and that mask 91 is removed from the top and sides. Applicants disagree. Claim 4 recites "the follow-on mask" which refers to the same follow-on mask recited in claim 1. Gruner's mask 91 is a different mask from Gruner's mask 90. Gruner does not disclose a single mask (90 or 91) that meets all of the recitations of claims 1 and 4. Moreover, Applicants submit that, contrary to the Examiner's assertion, there is no evidence that mask 91 is etched from a side. To the contrary, Gruner makes no mention whatsoever of etching a mask from its side.

Claims 27 and 28

Claim 27 depends from allowable independent claim 1 and additionally recites:

... reducing a length and the width of the wide section of the follow-on mask to form a core pad that is smaller than the wide section of the target shape; and
re-growing the follow-on mask along edges of the core pad to form an image pad that substantially conforms to the wide section of the target shape.

Also, claim 28 depends from allowable independent claim 8 and additionally recites:

... reducing a length and the width of the wide-image section of the follow-on mask to form a core pad that is smaller than the wide section of the target shape; and
re-growing the follow-on mask along edges of the core pad to form an image pad that substantially conforms to the wide section of the target shape.

Applicants submit that no proper combination of the applied art discloses or suggests the recited *reducing a length and the width ...*, or *re-growing the follow-on mask along edges of the core pad....* Nor has the Examiner identified any such disclosure in any of the applied art. In fact, the Examiner fails to even address the features of claims 27 and 28 in the current Office Action, and instead merely groups claims 27 and 28 with the rejection of other claims. Therefore, the Examiner has committed reversible error by improperly grouping claims 27 and 28 with the rejection of other claims while failing to address the language of claims 27 and 28.

Accordingly, Applicants respectfully request that the §103 rejection of claims 1, 4-8, 12-14, 21-28 be withdrawn.

Claims 9 and 10

Claims 9 and 10 are rejected under 35 U.S.C. §103(a) for being unpatentable over Gruner in view of “Applicants’ Admitted Prior Art,” and further in view of Nakai. This rejection is respectfully traversed. Claims 9 and 10 depend from independent claim 8 and are distinguishable from the applied art at least for the reasons discussed above with respect to independent claim 8. Moreover, the applied fails to disclose or suggest many of the additional features recited in dependent claims 9 and 10. For example, the applied art does not disclose or suggest *sizing the wide-image section of the follow-on mask to substantially align with a corresponding wide section of a final structure*, as recited in claim 10.

Accordingly, Applicants respectfully request that the §103 rejection of claims 9 and 10 be withdrawn.

Complete Action not Provided

Applicants respectfully submit that the Examiner did not provide a complete action. For example, as set forth above, Applicants submit that the Examiner has not addressed the features of at least claims 1, 21, 27 and 28. The Examiner is respectfully reminded of the guidance provided by 37 C.F.R. § 1.104(a)(1) regarding the Nature of Examination (emphasis added):

On taking up an application for examination . . . the examiner shall make a thorough study thereof and shall make a thorough investigation of the available prior art relating to the subject matter of the claimed invention. The examination shall be complete with respect to both compliance of the application . . . with the applicable statutes and rules and to the patentability of the invention as claimed, as well as with respect to matters of form, unless otherwise indicated.

Additionally, according to MPEP 706,

Before final rejection is in order a clear issue should be developed between the examiner and applicant. To bring the prosecution to as speedy conclusion as possible and at the same time to deal justly by both the applicant and the public, the invention as disclosed and claimed should be thoroughly searched in the first action and the references fully applied; and in reply to this action the applicant should amend with a view to avoiding all the grounds of rejection and objection.

Additionally, MPEP §707.07(f) states:

In order to provide a complete application file history and to enhance the clarity of the prosecution history record, an examiner must provide clear explanations of all actions taken by the examiner during prosecution of an application.

...

Where the applicant traverses any rejection, the examiner should, if he or she repeats the rejection, take note of applicant's argument and answer the substance of it.

Applicants submit that the claimed features were not addressed in a clear manner such that a clear issue was not developed between the Examiner and Applicants. Accordingly,

Applicants respectfully submit that the next action should not be a final action. Moreover, should the Examiner repeat a rejection in the next Office Action, Applicants respectfully request the Examiner answer the substance of Applicants' argument(s) regarding the rejection.

CONCLUSION

In view of the foregoing remarks, Applicants submit that all of the claims are patentably distinct from the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue. The Examiner is invited to contact the undersigned at the telephone number listed below, if needed. Applicants hereby make a written conditional petition for extension of time, if required. Please charge any deficiencies in fees and credit any overpayment of fees to Attorney's Deposit Account No. 09-0456.

Respectfully submitted,
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